Claims

[c1]   A method of determining breast cancer risk comprising the steps of:

establishing a risk probably value associated with a patient, the risk probability value calculated from an array of risk factors associated with breast cancer;

applying a computer algorithm adapted to find abnormalities in the patient's mammogram; and

increasing the tolerance level for false positive results in the computer algorithm responsive to a higher probability value associated with the patient and decreasing the tolerance level for false positive results in the computer algorithm responsive to a lower probability value associated with the patient.

[c2]   The method of claim 1 wherein the risk factors include relative risk values.

[c3]   The method of claim 1 wherein the risk factors include odds ratio values.

[c4]   The method of claim 1 wherein the risk factors include absolute risk values.

[c5]   The method of claim 1 further comprising the steps of:
obtaining a patient-specific breast tissue density value derived by automated means from the patient's mammogram; and
integrating the breast tissue density value in the risk probability value.

[c6]   The method of claim 1 further comprising the step of flagging mammograms generating a positive result for breast cancer for additional analysis.

[c7]   The method of claim 1 further comprising the step of flagging mammograms generating a negative result for breast cancer.

[c8]   The method of claim 6 further comprising the step of generated a recommended course of action wherein more invasive procedures are recommended responsive to the higher probability value and less invasive procedures are recommended responsive to the lower probability value.

[c9]

The method of claim 1 further comprising the steps of:
providing a data entry interface adapted to input the array of risk factors associated with the patient;

digitally acquiring the patient's mammogram; and

applying the algorithm to the mammogram to find abnormalities.

[c10]   The method of claim 9 further comprising the step of storing the array of risk factors on an electronic storage medium communicatively coupled to the digitally acquired mammogram.

[c11]   The method of claim 9 wherein the mammograms associated with abnormal risk findings are electronically presented with computer aided enhancement.

[c12]   The method of claim 1 wherein the array of risk factors includes at least one factor selected from a group of factors including age, racial background, geographic background hormonal data, breast size, weight and height, pregnancies, breast surgeries, breast water content, transverse relaxation time, family medical history, previous biopsies, length of reproductive years, menopausal status, parity, age of menarche, age of menopause, involution characterization, density time dependency, density dependent texture, dietary factors, abnormality spatial location and physical activity.